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$0.00 Estimated cost this search
$0.00 Estimated total session cost 0.174 DialUnits

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Set	Items	Description
S1	1	PN=JP 81010037

?SS PN=JP 81010037
?T S1/7/ALL

1/7/1
DIALOG(R)File 352:Derwent WPI
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003164062
WPI Acc No: 1981-24603D/198114
L-Threonine prepn. by fermentation - of diaminopimelic acid and methionine requiring escherichia which is resistant to feed-back inhibition of threonine
Patent Assignee: KYOWA HAKKO KOGYO KK (KYOW)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 81010037	B	19810305				198114 B

Priority Applications (No Type Date): JP 6961000 A 19690804

Abstract (Basic): JP 81010037 B

A microorganism belonging to the genus Escherichia which requires diaminopimelic acid and methionine and is resistant to feed-back inhibition of threonine is cultured on a nutrient culture medium contg. diaminopimelic acid and methionine, L- threonine is accumulated in the culture medium, and is then recovered.

Examples of the microorganism usable in this method include Escherichia coli KY 8306 ATCC 21530. The ingredients in the culture medium are conventional ones for fermentation of amino acid. Cultivation is conducted at 20 to 40 deg.C under agitation or other aerobic conditions for 1 to 5 days. The culture medium is adjusted to pH 2 with hydrochloric acid, adsorbed on strong acid type cation exchange resin, eluted with ammonium soln, concd. and cooled. (J44061000)

Derwent Class: B05; D16; E16
International Patent Class (Additional): C12P-013/08
?SS PN=JP 81134993
S2 0 PN=JP 81134993
?SS PN=JP 56134993
S3 1 PN=JP 56134993
?T S3/7/ALL

3/7/1
DIALOG(R)File 352:Derwent WPI

003211789
WPI Acc No: 1981-72344D/198140
Fermentative prodn. of L-threonine - from methionine metabolism-antagonist resistant mutant of Serratia marcescens
Patent Assignee: TANABE SEIYAKU CO (TANA)
Inventor: CHIBATA I; KISUMI M; KOMATSUBAR S; MURATA K
Number of Countries: 004 Number of Patents: 007
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
GB 2072185	A	19810930	GB 818731	A	19810320	198140	B
JP 56134993	A	19811022	JP 8636777	A	19860321	198149	
DE 3110789	A	19820121	DE 3110789	A	19810319	198204	
GB 2072185	B	19840328				198413	
US 4463094	A	19840731	US 81244348	A	19810317	198433	
JP 87036674	B	19870807				198735	
DE 3110789	C	19880114				198802	

Priority Applications (No Type Date): JP 8036777 A 19800321; DE 3110789 A 19810319; JP 8636777 A 19860321
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
GB 2072185	A		4		

Abstract (Basic): GB 2072185 A

L-Thronine is prepd. by cultivating in a suitable broth or methionine metabolism-antagonist resistant mutant of Serratia marcescens having L-threonine productivity.

Mutants may be obtained by inducing mutation in suitable parent strains such as S. marcescens D-60, HNr53, AECr301 and T-570. A representative mutant to be used in the present process is S. marcescens Sr41-P-103(FERM-P No.5413,ATCCN No.31809), obtained from AEG301 and resistant to ethionine. Cultivation may effected at pH 6-8 and temp. 25-37 deg.C for 2-6 days, under good conditions for supplying oxygen.

An improved method for the prepn. of L-threonine is provided, yields being better than in known similar methods.

Derwent Class: B05; D16; E16
International Patent Class (Additional): C07C-101/30; C12N-001/20; C12N-015/00; C12P-013/08; C12R-001/43
?SS PN=JP 62044193
S4 1 PN=JP 62044193
?T S4/7/ALL

4/7/1
DIALOG(R)File 352:Derwent WPI

007066276
WPI Acc No: 1987-066273/198710
High yield prodn. of l-threonine - comprises cultivation of appropriate Providencia or Escherichia strains resistant to isoleucine antagonist, in culture medium
Patent Assignee: TORAY IND INC (TORA)
Inventor: SHIRAI M; TAKECUHI M; TSUTSUI H; YAMADA K; YOTSUMOTO K; TAKEUCHI M
Number of Countries: 006 Number of Patents: 008
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 213536	A	19870311	EP 86111424	A	19860819	198710 B
JP 62044193	A	19870226	JP 85183925	A	19850823	198714
JP 62198396	A	19870902	JP 8642581	A	19860227	198741
JP 91013875	B	19910225	JP 85183925	A	19850823	199112
EP 213536	B	19920318	EP 86111424	A	19860819	199212
DE 3684383	G	19920423				199218
JP 92068916	B	19921104	JP 8642581	A	19860227	199248
US 5264353	A	19931123	US 86897528	A	19860818	199348
			US 91652455	A	19910207	

Priority Applications (No Type Date): JP 8642581 A 19860227; JP 85183925 A 19850823
Cited Patents: 3.Jnl.Ref; A3...8812; DE 2044907; JP 48077090; JP 6804440; No-SR.Pub; US 3375173; JP 73077090
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 213536	A	E	13		
Designated States (Regional): DE FR GB IT					
EP 213536	B		15		
Designated States (Regional): DE FR GB IT					
JP 92068916	B		4	C12P-013/08	Based on patent JP 62198396
US 5264353	A		7	C12P-013/08	Cont of application US 86897528

Abstract (Basic): EP 213536 A

Prodn. of L-threonine (I) comprises (a) cultivating a (I) producing strain of Providencia or Eschevichia, each having resistance to an isoleucine antagonist (II), in a culture medium; and (b) recovering the accumulated (I) from the medium.

(II) is esp. thiaisoleucine. With Providencia strains a resistance to an aspartic acid antagonist is pref., e.g. to aspartic acid hydroxamate. It may also have resistance to alpha-amino-beta-hydroxyvaleric acid and L-ethionine and have an auxotroph, including leaky type, for L-isoleucine, and it requires L-isoleucine for growth. With Escherichia strains, L-methionine and L-valine may be required for growth, and the strains are sensitive to borrelidin. Typical strains that may be used include Providencia rettgeri TP6-28, AXR 2G-10 and TP7-55 and E.coli M-5. These are mutants obtd. from e.g. Providencia rettgeri ATCC 21118 and E.coli ATCC 21248.

USE/ADVANTAGE - (I) is formed in much higher accumulated amounts and yields than in prior fermentation processes.

Abstract (Equivalent): EP 213536 B

A process for producing L-threonine by fermentation which comprises the steps of (a) culturing an L-threonine producing microorganism belonging to the genus Providencia or the genus Escherichia until L-threonine is accumulated in a culture broth, said microorganisms having a resistance to isoleucine antagonist and (b) recvoverinrecovering the accumulated L-threonine from the culture

broth.

Abstract (Equivalent): US 5264353 A

Fermentation prodn. of L-Thr comprises culturing Providencia rettgeri (FERM BP-1135), (FERM BP-1137) or (FERM BP-1138) in aq. nutrient contg. O, N and minerals, then recovering the accumulated L-Thr from the broth. Similarly Eccherichia coli (FERM BP-1136 (M-5)) may be used.

ADVANTAGE - These organisms, having resistance to i-Leu antagonist, prod. L-Thr in high yield.

Dwg. 0/0

Derwent Class: B05; D16; E16

International Patent Class (Main): C12P-013/08

International Patent Class (Additional): C12N-001/20; C12N-015/00; C12R-001/01; C12R-001/18; C12P-013/08; C12R-001-19

?SS PN=JP 50031093

S5 1 PN=JP 50031093

?T S5/7/ALL

5/7/1

DIALOG(R)File 352:Derwent WPI

001406631

WPI Acc No: 1975-56338W/197534

L-Threonine and L-lysine prodn - from mutant of brevibacterium species

Patent Assignee: AJINOMOTO KK (AJIN)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 50031093	A	19750327				197534	B

Priority Applications (No Type Date): JP 7384340 A 19730726

Abstract (Basic): JP 50031093 A

L-Threonine (I) and L-Tysine (II) were produced from a mutant of Brevibacterium which is resistant to S-(2-amino-ethyl)-L-cysteine and alpha-amino-beta-hydroxyvaleric acid and requires L-leucine. In an example, B.lactofermentum (FERM-P 2150) was cultured in a medium (pH 7.2) contg. glucose 10, KH2PO4 0.1, MgSO4.7H2O 0.1, and (NH4)2SO4 3%, plus biotin 100, and vitamin B; HCl 300 mu g/l., Mieki (protein hyrolysate) 1.5 ml./dl., L-leucine 30 and L-isoleucine 25 mg./dl., and 2 p.p.m. of Fe2+ and Mn2+ at 31.5 degrees for 48 hrs. Yields of (I) and (II) were 1.86g. and 1.65 g., resp. The culture supernatant was passed through a column of Amberlite IRC-50 to adsorb (II). The eluate was passed through a column of Diaion SK-1B (NH4+) at pH 2.0 to adsorb (I). (I) and (II) were eluated with 1 N NH4OH and crystallised yielding 11.3g. and 12.5g. from 1 l. culture broth, resp.

Derwent Class: B05; D16; E16

?SS PN=JP 63273487

S6 1 PN=JP 63273487

?T S6/7/ALL

6/7/1

DIALOG(R)File 352:Derwent WPI

007268249

WPI Acc No: 1987-265256/198738

High yield prodn. of L-threonine - comprises culturing escherichia coli mutant strain esp. ferm BP-985 etc.

Patent Assignee: KYOWA HAKKO KOGYO CO LTD (KYOW); KYOWA HAKKO KOGYO KK (KYOW)

Inventor: FURUKAWA S; KOTANI Y; NAKANISHI T; OZAKI A; SUGIMOTO M
Number of Countries: 003 Number of Patents: 006
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 237819	A	19870923	EP 87102313	A	19870218	198738	B
JP 63273487	A	19881110	JP 8733693	A	19870217	198851	
US 5017483	A	19910521	US 8713797	A	19870212	199123	
EP 237819	B1	19931229	EP 87102313	A	19870218	199401	
DE 3788583	G	19940210	DE 3788583	A	19870218	199407	
			EP 87102313	A	19870218		
JP 2574786	B2	19970122	JP 8733693	A	19870217	199708	

Priority Applications (No Type Date): JP 86303138 A 19861219; JP 8636164 A 19860220; JP 8636165 A 19860220; JP 86162569 A 19860710
Cited Patents: 2.Jnl.Ref; A3...8827; FR 1484846; FR 1580549; GB 1342308; GB 2072185; JP 56010037; No-SR.Pub; US 3494830
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 237819	A	E	8		
EP 237819	B1	E	7	C12P-013/08	
DE 3788583	G			C12P-013/08	Based on patent EP 237819
JP 2574786	B2		5	C12P-013/08	Previous Publ. patent JP 63273487

Abstract (Basic): EP 237819 A

Prodn. of L-threonine (I) comprises culturing in a nutrient medium an Escherichia strain capable of producing (I) and having resistance to rifampicin, lysine, methione, aspartic acid or homoserine, or a decreased ability to degrade (I); then recovering (I) from the medium.

Biologically pure culture of Escherichia coli FERM BP-985, -1094, -1095, -1236, -1237 or -984 having the ability to produce (I) is new.

The E coli strains are pref. obtd. by mutating (I)-producing strains, then culturing the mutants in a minimal medium contg. over 20 micrograms/ml rifampicin and recovering the mutants. Similar procedures may be used with media contg. 10 g/l lysine, methionine, aspartic acid or homoserine.

USE/ADVANTAGE - (I) is obtd. in high yield and economically by using the Escherichia strains.

0/1

Abstract (Equivalent): EP 237819 B

A process for producing L-threonine which comprises culturing in a medium a microorganism of the genus Escherichia capable of producing L-threonine which has resistance to at least one of lysine, methionine, aspartic acid and homoserine, accumulating L-threonine in the culture liquor, and recovering L-threonine therefrom, wherein said microorganism is Escherichia coli H-4435 (FERM BP-1094), H-4436 (FERM BP-1095), H-4425 (FERM BP-1236) or H-4226 (FERM BP-1237).

Dwg.0/1

Abstract (Equivalent): US 5017483 A

L-threonine (LT) is produced by culturing in a medium E coli H-4,258, H-4,435, H-4,436, H-4,225, H-4,226, or H-4,257 and B) accumulating LT in the culture liquor and recovering the LT. Culturing is pref carried out at 20-40 deg C for 2-7 days.

ADVANTAGE - High yields of LT are obtd from microorganism of genus Escherichia having resistance to rifampicin, lysine, methionine, aspartic acid and/or homoserine or a decreased ability to degrade LT. (4pp)

Derwent Class: B05; D16; E16
International Patent Class (Main): C12P-013/08
International Patent Class (Additional): C12N-001/20; C12N-015/00; C12R-001/18; C12R-001-19; C12P-013/08; C12R-001-185

?SS PN=JP 77048195
S7 1 PN=JP 77048195

?T S7/7/ALL

7/7/1
DIALOG(R)File 352:Derwent WPI

001794588
WPI Acc No: 1977-15554Y/197709
LThreonine prepn. by fermentation - using a mutant of the genus Cerachia (e.g. Cerachia marcessence)
Patent Assignee: TANABE PHARM CO LTD (TANA)
Number of Countries: 001 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 52007488	A	19770120				197709	B
JP 77048195	B	19771208				197802	

Priority Applications (No Type Date): JP 7583052 A 19750704

Abstract (Basic): JP 52007488 A
Mutation is induced on an original of the Genus Cerachia (e.G, Cerachia marcessence) by, for example, irradiating with UV or treating with a mutation-inducing agent (e.g., N-methyl-N'-nitro-N-nitrosoguanidine, ethyl methanesulphonate, etc). The mutant is cultivated in a plate culture modified to contain L-threonine as a main carbon or nitrogen source and traces of yeast extract at 30 degrees C for 3-5 days. Mutant obtd. lacks L-threonine dehydrogenase.
Mutation is continued further in the same manner and the resulting mutant is cultivated in a plate culture contg. 5-20 mg/ml of an L-threonine antimetabolite, (e.g., beta--hydroxynorvaline, threonine hydroxamate, etc.) at 30 degrees C for 2-3 days to obtain a mutant which lacks L-threonine dehydrogenase having resistance to L-threonine antimetabolite. The thus obtd. mutant is cultivated and the produced L-threonine is recovered.
Derwent Class: B05; D16; E16
International Patent Class (Additional): C12D-013/06
?SS PN=JP 4330275
S8 1 PN=JP 4330275
?T S8/7/ALL

8/7/1
DIALOG(R)File 352:Derwent WPI

009310028
WPI Acc No: 1993-003491/199301
Culture of aminoacid-producing bacterium - has bacterial strain grown in medium contg. aminoacid by using the strain
Patent Assignee: AJINOMOTO KK (AJIN)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 4330275	A	19921118	JP 91193749	A	19910430	199301	B

Priority Applications (No Type Date): JP 91193749 A 19910430
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 4330275	A		10	C12N-001/20	

Abstract (Basic): JP 4330275 A
A method for growing an amino acid (I)-producing bacterium which

has a mutation of an aminoacyl t-RNA synthase gene to the (I) is claimed. The method comprises having an mutation requiring the addn of the amino acid (I) to the medium being added in an amount higher than that required by the mutant in which the biosynthetic path of (I) is interrupted for the growth. A metabolism-controlling mutation of the biosynthesis of (I), and a valine (II)-producing strain is prepd. by the above method. The mutant is E. coli. The prepn. of L-isoleucine (III) in which the above mutant is cultured is a nutrition liquid medium and (III) is recovered from the medium.

USE/ADVANTAGE - The method can prepare a mutant producing valine (II) and L-isoleucine (III) in higher yields than the conventional method.

In an example, E coli K12 W3350 is treated with N-methyl-N'-nitro-N-nitrosoguanidine and cultured at 37degC for 24 hrs. in the presence of 10 mg/ml (III). The cell is washed and suspended in a minimum medium contg. 0.2% glucose and incubated at 37degC. Penicillin G is added to 2000 units/ml when the cell is grown to twice amount and incubated at 37degC for 3 hrs. and the cell is washed and spread in a minimum agar medium contg. 0.2% glucose and 10 mg/ml (III) and then the (III)-requiring mutant which can grow in a medium contg. (III) in a high concn. is collected. Thus, three strains, IleS2, IleS17 and IleS32 are isolated respectively. A highly (II)-requiring mutant is also prepd. by E coli VL1502.

Dwg.0/0

Derwent Class: B05; D16; E19
International Patent Class (Main): C12N-001/20
International Patent Class (Additional): C12P-013/04; C12P-013/06; C12P-013/08; C12N-001/20; C12R-001-19

?SS PN=JP 4112795

S9	1	PN=JP 4112795

?T S9/7/ALL

9/7/1
DIALOG(R)File 352:Derwent WPI
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008946343
WPI Acc No: 1992-073612/199210
Microbial prodn. of L-tryptophan - using corynebacterium or brevibacterium which are resistant to aminoquinoline deriv. or phenothiazine deriv.
Patent Assignee: KYOWA HAKKO KOGYO KK (KYOW); KYOWA HAKKO KOGYO CO LTD (KYOW)
Inventor: FURUKAWA K; KINO K; KURATSU Y; TOMIYOSHI Y; KORATSU Y
Number of Countries: 008 Number of Patents: 011
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 473094	A	19920304	EP 91114271	A	19910826	199210	B
JP 4112795	A	19920414	JP 90228715	A	19900830	199221	
CA 2049863	A	19920301	CA 2049863	A	19910826	199224	
HU 61600	T	19930128	HU 912820	A	19910829	199309	
EP 473094	A3	19920708	EP 91114271	A	19910826	199334	
US 5275940	A	19940104	US 91748559	A	19910822	199402	
EP 473094	B1	19950621	EP 91114271	A	19910826	199529	
DE 69110580	E	19950727	DE 610580	A	19910826	199535	
			EP 91114271	A	19910826		
CA 2049863	C	19970114	CA 2049863	A	19910826	199714	
HU 214909	B	19980728	HU 912820	A	19910829	199842	
JP 3023615	B2	20000321	JP 90228715	A	19900830	200019	

Priority Applications (No Type Date): JP 90228715 A 19900830
Cited Patents: NoSR.Pub; 1.Jnl.Ref; EP 128637; JP 56092796

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 473094	A		6		
Designated States (Regional): DE FR GB IT					
JP 3023615	B2		5	C12P-013/22	Previous Publ. patent JP 4112795
JP 4112795	A		5		
EP 473094	A3		6		
US 5275940	A		4	C12P-013/22	
EP 473094	B1 E		7	C12P-013/22	
Designated States (Regional): DE FR GB IT					
DE 69110580	E			C12P-013/22	Based on patent EP 473094
HU 214909	B			C12P-013/22	Previous Publ. patent HU 61600
CA 2049863	A			C12N-001/20	
HU 61600	T			C12P-013/22	
CA 2049863	C			C12N-001/20	

Abstract (Basic): EP 473094 A

A process for producing L-tryptophan is claimed which comprises culturing in a medium a microorganism belonging to the genus Corynebacterium or Brevibacterium and having resistance to an aminoquinoline deriv.. (I) or a phenothiazine deriv. (II) and the ability to produce L-tryptophan, until L-tryptophan is accumulated in the culture, and recovering L-tryptophan. (I) may be eg. chloroquine, amodiaquine, primaquine or pentaquine. (II) may be eg. phenothiazine, promazine, chlorpromazine, promethazine.

Also claimed are biologically pure cultures of Corynebacterium glutamicum H-7853 (FERM BP-3055). H-7854 (FERM BP-3056) and H-8014 (FERM BP-3057).

USE/ADVANTAGE - The process can be used by produce L-tryptophan in high yields at low cost. The tryptophan can be used as a medicament, food or an additive for animal feed.

Abstract (Equivalent): EP 473094 B

A process for producing L-tryptophan which comprises culturing in a medium a microorganism belonging to the genus Corynebacterium or Brevibacterium and having resistance to an amino-quinoline derivative or a phenothiazine derivative and an ability to produce L-tryptophan until L-tryptophan is accumulated in the culture, and recovering L-tryptophan therefrom.

Dwg.0/0

Abstract (Equivalent): US 5275940 A

L-tryptophan is produced by culturing a species of Coryne-bacterium glutamicum in a nutrient medium until it accumulates, and recovering it. Species comprises C.glutamicum FERM BP-3055 having resistance to primaquine, C.glutamicum FERM BP-3056 having resistance to chloroquine, or C.glutamicum FERM BP-3057 having resistance to promazine.

USE - As a medicament or food, or additive for animal feed.

Dwg.0/0

Derwent Class: B02; C02; D13; D16; E13
International Patent Class (Main): C12P-013/22
International Patent Class (Additional): C12N-001/20; C12R-001/15; C12R-001-15; C12P-013/22

?SS PN=JP 58000893

S10 1 PN=JP 58000893

?T S10/7/ALL

10/7/1
DIALOG(R)File 352:Derwent WPI
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003655205
WPI Acc No: 1983-15185K/198307
Isoleucine high yield prodn. - by aerobic cultivation of Brevibacterium

or Corynebacterium strain obtd. by recombinant DNA method
Patent Assignee: AJINOMOTO KK (AJIN)
Inventor: MIWA K; NAKAMORI S; TSUCHIDA T
Number of Countries: 005 Number of Patents: 004
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 71023	A	19830209				198307	B
JP 58000893	A	19830106				198307	
US 4442208	A	19840410	US 82392145	A	19820625	198417	
JP 91053913	B	19910816	JP 8198699	A	19810625	199137	

Priority Applications (No Type Date): JP 8198699 A 19810625
Cited Patents: 2.Jnl.Ref; EP 39743; FR 2078671; JP 50101582; JP 54035287; No-SR.Pub; US 4278765
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 71023	A	E	20		

Designated States (Regional): DE FR GB

Abstract (Basic): EP 71023 A

Prodn. of L-isoleucine (I) comprises aerobic cultivation of a transformed microorganism strain resistant to alpha-amino -beta-hydroxyvaleric acid (II) in an aq. culture medium, and the (I) is subsequently recovered. The strain is obtd. by incorporation into a recipient strain of the genus Brevibacterium or Corynebacterium (sensitive to (II)) of a plasmid DNA obtd. from a Brevibacterium or Corynebacterium strain into which there has been inserted a fragment of chromosomal DNA derived from a DNA-donor strain of a similar bacterial strain resistant to (II).

Construction of a (I)-producing strain of bacterium by genetic transformation comprises (a) sepn. of a plasmid DNA from a Brevibacterium or Corynebacterium strain; (b) insertion into the plasmid DNA of chromosomal DNA from the (I)-resistant DNA-donor strain; (c) incorporation of the resulting recombinant plasmid into a recipient (I)-sensitive strain of the bacteria; and (d) isolation of a transformed strain resistant to (I).

The (I) can be obtd. in high yields, in contrast to the results with prior microorganisms on fermentation. Although plasmids in Brevibacterium and Corynebacterium strains are known (EP 30391), they did not have characteristics useful as a marker.

Derwent Class: B05; D16; E16
International Patent Class (Additional): C12N-001/20; C12N-015/00; C12P-013/06; C12R-001/13
?SS PN=JP 60012995

S11	1	PN=JP 60012995

?T S11/7/ALL

11/7/1
DIALOG(R)File 352:Derwent WPI

004192823
WPI Acc No: 1985-019703/198504
High yield prodn. of l-isoleucine and l-threonine - by cultivation of coryneform bacteria transformed with DNA fragment
Patent Assignee: AJINOMOTO KK (AJIN)
Inventor: ISHIDA M; ITO K; MIWA K; NAKAMORI S; SANO K; TAKAJI H
Number of Countries: 006 Number of Patents: 006
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 131171	A	19850116	EP 84106817	A	19840614	198504	B
JP 60012995	A	19850123	JP 84113217	A	19840604	198510	

US 4601983	A	19860722	US 83504471	A	19830615	198632
EP 131171	B	19871021				198742
DE 3466894	G	19871126				198748
JP 93047196	B	19930716	JP 84113217	A	19840604	199331

Priority Applications (No Type Date): US 83504471 A 19830615
Cited Patents: EP 66129; EP 71023; EP 93611
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 131171	A	E	40		
Designated States (Regional): DE FR GB IT					
EP 131171	B	E			
Designated States (Regional): DE FR GB IT					
JP 93047196	B		14	C12P-013/06	Based on patent JP 60012995

Abstract (Basic): EP 131171 A

DNA fragment contg. a genetic sequence comprising information coding for the prodn. of a protein having the activity of homoserine dehydrogenase (HD) is new. It has a molecular wt. of 2.24 million daltons and 2 Pst I sites dividing the sequence into 3 fragments of molecular wts. 0.7, 0.44 and 1.1 million daltons.

Vehicle capable of replication in Coryneform bacteria and contg. information coding for HD is new. Coryneform bacterial host contg. a vehicle as defined above is new. Coryneform bacteria deposited as FERM BP-269, 270 and 271 and NRRL B-15348 are new. Prodn. of L-isoleucine or L-threonine comprises cultivation of a bacterium as defined in paragraph (4) above in a nutrient medium.

The Coryneform transformants on cultivation produce L-isoleucine and L-threonine in higher yields than can be obtd. with known mutants. 0/8

Abstract (Equivalent): EP 131171 B

A DNA fragment containing a genetic sequence comprising information coding for the production of a protein having the activity of homoserine dehydrogenase, having a molecular weight of 2.24 Md and two Pst I sites dividing said sequence into three regions of 0.7, 0.44 and 1.10 Md, respectively. (18pp)

Abstract (Equivalent): US 4601983 A

L-Isoleucine (I) is produced by (a) culturing, in an appropriate medium, a bacterium comprising a Coryneform host contg. a vehicle capable of replication in a Coryneform bacterium contg. genetic information coding for the prodn. of a protein having the activity of homoserine dehydrogenase, the host being resistant to alpha-amino-beta-hydroxyvaleric acid; and (b) recovering (I) from the medium. The Coryneform bacterium is selected from FERM BP-270 and FERM BP-271.

ADVANTAGE - (I) is produced by an improved and efficient fermentation method. (12pp)d

Derwent Class: B05; D16; E16
International Patent Class (Main): C12P-013/06
International Patent Class (Additional): C12N-015/60; C12P-013/08; C12R-001/13; C12P-013/06; C12R-001-13; C12R-001-15

?SS PN=JP 60210994

S12 1 PN=JP 60210994

?T S12/7/ALL

12/7/1
DIALOG(R)File 352:Derwent WPI
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004479245
WPI Acc No: 1985-306123/198549
Histidine prodn. in high yield - includes transforming host strain of

Corynebacterium or Brevibacterium species
Patent Assignee: KYOWA HAKKO KOGYO KK (KYOW)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 60210994	A	19851023				198549	B

Priority Applications (No Type Date): JP 8468669 A 19840406
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 60210994	A		11		

Abstract (Basic): JP 60210994 A

Host strain selected from Corynebacterium sp. and Brevibacterium sp. is transformed with a transformant DNA comprising (i) a DNA fragment contg. a histidine formation-relating gene and (ii) a vector DNA, to obtain a recombinant strain, and recombinant strain is cultured in a medium and the formed histidine is isolated.

Pref. DNA fragment (i) is derived from eukaryote, prokaryote, virus, bacteriophage or plasmid. Prokaryote is pref. bacteria. Pref. bacteria is of 1,2,4-triazole-3-alanine resistant Corynebacterium glutamicum.

USE/ADVANTAGE - Yield of histidine is high, using histidine-producing recombinant strain.

0/0

Derwent Class: B03; D16; E13
International Patent Class (Additional): C12N-015/00; C12P-013/24
?SS PN=JP 60030693
S13 1 PN=JP 60030693
?T S13/7/ALL

13/7/1
DIALOG(R)File 352:Derwent WPI

004079901
WPI Acc No: 1984-225442/198436
Amino acid prepn. - involves culturing transformed strain produced by corynebacterium or brevibacterium microorganisms
Patent Assignee: KYOWA HAKKO KOGYO CO LTD (KYOW); KYOWA HAKKO KOGYO KK (KYOW)
Inventor: HARA M; KATSUMATA R; MIZUKAMI T; OKA T; OZAKI A; YOKOI H
Number of Countries: 022 Number of Patents: 056
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 8403301	A	19840830	WO 84JP47	A	19840216	198436	B
JP 59156292	A	19840905	JP 8325398	A	19830217	198442	
JP 59156294	A	19840905	JP 8325397	A	19830217	198442	
AU 8425721	A	19840910				198449	
JP 60024192	A	19850206	JP 8394392	A	19830528	198512	
JP 60030693	A	19850216	JP 83138775	A	19830729	198513	
JP 60034197	A	19850221	JP 83142804	A	19830804	198514	
EP 136359	A	19850410	EP 84900870	A	19840216	198515	
JP 60066989	A	19850417	JP 83176758	A	19830924	198522	
ES 8505410	A	19850901	ES 534893	A	19840803	198602	
ES 8506094	A	19851016	ES 529850	A	19840217	198604	
ES 8506804	A	19851116	ES 532859	A	19840525	198609	
ES 8600394	A	19860101				198613	
ES 8600400	A	19860101				198613	
ES 8602941	A	19860316				198620	
CA 1218025	A	19870217				198712	
CA 1221928	A	19870519				198724	

CA 1225051	A	19870804				198735
CA 1228038	A	19871013				198745
CA 1228039	A	19871013				198745
CA 1228040	A	19871013				198745
US 4775623	A	19881004	US 84646512	A	19840831	198842
EP 332233	A	19890913	EP 89108171	A	19840216	198937
EP 332234	A	19890913	EP 89108172	A	19840216	198937
EP 334391	A	19890927	EP 89108164	A	19840216	198939
EP 336452	A	19891011	EP 89108165	A	19840216	198941
US 4874698	A	19891017	US 8773888	A	19870716	198951
US 4908312	A	19900313	US 88281920	A	19881207	199016
US 4927758	A	19900522	US 8789922	A	19870825	199024
IT 1178858	B	19870916				199035
IT 1178859	B	19870916				199035
IT 1178948	B	19870916				199035
IT 1179025	B	19870916				199036
IT 1179031	B	19870916				199036
IL 72507	A	19900712				199037
IL 72508	A	19900712				199037
IL 71944	A	19900831				199039
IT 1182283	B	19871005				199039
IL 70989	A	19900917				199044
IL 73028	A	19900917				199044
EP 136359	B	19910403				199114
DE 3484378	G	19910508				199120
IL 71145	A	19910916				199205
JP 93023750	B	19930405	JP 83176758	A	19830924	199316
JP 95032711	B2	19950412	JP 83138775	A	19830729	199519

Priority Applications (No Type Date): JP 83176758 A 19830924; JP 8325397 A 19830217; JP 8325398 A 19830217; JP 8394392 A 19830528; JP 83138775 A 19830729; JP 83142804 A 19830804; EP 84900870 A 19840216; EP 89108164 A 19840216; EP 89108165 A 19840216

Cited Patents: EP 66129; EP 71023; EP 82485; EP 88166; EP 93611; FR 2482622 ; GB 2076853; JP 56148295; JP 56148296; JP 57005693; JP 57186492; JP 57186496; SSR870422; FR 2484448; JP 81148295; JP 81148296; JP 82005693; JP 82186492; JP 82186496

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 8403301	A	J	75		
Designated States (National): AU					
Designated States (Regional): AT BE CH DE FR GB NL SE					
EP 136359	A	E			
Designated States (Regional): AT BE CH DE FR GB LI NL SE					
EP 332233	A	E	14		
Designated States (Regional): AT BE CH DE FR GB LI NL SE					
EP 332234	A	E	15		
Designated States (Regional): AT BE CH DE FR GB LI NL SE					
EP 334391	A	E			
Designated States (Regional): AT BE CH DE FR GB LI NL SE					
EP 336452	A	E			
Designated States (Regional): AT BE CH DE FR GB LI NL SE					
EP 136359	B				
Designated States (Regional): AT BE CH DE FR GB LI NL SE					
JP 93023750	B		9	C12P-013/10	Based on patent JP 60066989
JP 95032711	B2		9	C12N-015/09	Based on patent JP 60030693

Abstract (Basic): WO 8403301 A

Amino acid ppn. involves (1) culturing Corynebacterium or Brevibacterium microorganisms into which recombinant DNA comprising vector DNA and DNA fragments contg. enzyme genes that contribute to amino acid biosynthesis have been introduced; and (2) growing,

accumulation and recovery of amino acid in the culture soln.

The DNA fragments are pref. produced from a prokaryote, eucaryote, virus, bacteriphage or plasma. The prokaryote is, e.g., a gene from Eschericia, Corynebacterium, Brevibacterium, Microbacterium, Bacillus, Streptococcus or Serratia bacteria pref. resistant to 1,2,4-triazole-3-alanine, 4-methyl tryptophan, 5-methyl tryptophan, 6-methyl tryptophan and parafluorophenyl alanine. The DNA fragment pref. contains anthranilic acid synthesis enzyme, 3-deoxy-2-keto-D-arabino-heptulosonate-7-phosphate synthesis enzyme, prephanic acid dehydrase, prephanate dehydrogenase or prethyrosin amino transferase genes.

Abstract (Equivalent): EP 136359 B

(+17.2.83, 28.5.83, 29.7.83, 4.8.83-JP-025398, 094392, 138775, 142804) A process for producing L-histidine which comprises culturing in a medium a microorganism obtained by transforming a host microorganism belonging to the genus Corynebacterium or Brevibacterium with a recombinant DNA wherein a DNA fragment containing a gene involved in the biosynthesis of L-histidine and conferring a resistance to the histidine analogue 1,2,4-triazole-3-alanine is inserted into a vector DNA, accumulating L-histidine in the culture and recovering L-histidine therefrom.

EP 334391 B

A process for producing L-isoleucine which comprises culturing in a medium a microorganism obtainable by transforming a host microorganism belonging to the genus Corynebacterium or Brevibacterium with a recombinant vector comprising a DNA fragment containing the threonine operon of Escherichia coli, accumulating L-isoleucine in the culture medium and recovering L-isoleucine therefrom.

Dwg.0/2

EP 332234 B

A process for producing L-tyrosine which comprises culturing in a medium a microorganism obtainable by transforming a host microorganism belonging to the genus Corynebacterium or Brevibacterium with a recombinant DNA wherein a DNA fragment containing a gene coding for 3-deoxy-2-keto-D-arabino -heptulosonate-7-phosphate synthetase, chorismate mutase and prephenate dehydrogenase is inserted into a vector DNA, accumulating L-tyrosine in the culture and recovering L-tyrosine therefrom.

Dwg.0/2

EP 336452 B

A process for producing L-phenylalanine which comprises culturing a microorganism obtained by transforming a hoot microorganism belonging to the genus Corynebacterium or Brevibacterium with a recombinant DNA wherein a DNA fragment containing the gene coding for chorismate mutase and prephenate dehydratase is inserted into a vector DNA, accumulating L-phenylalanine in the culture and recovering L-phenylalanine therefrom.

Dwg.0/0

EP 332233 B

A process for producing L-arginine which comprises culturing in a medium a microorganism obtained by transforming a host microorganism belonging to the genus Corynebacterium or Brevibacterium with a recombinant DNA wherein a DNA fragment containing the genes coding for acetylornithine deacetylase, N-acetylglutamate-gamma- semialdehyde dehydrogenase, N-acetylglutamokinase and argininosuccinase which are isolated from Escherichia coli, is inserted into a vector DNA, accumulating L-arginine in the culture and recovering L-arginine therefrom.

Dwg.0/1

Abstract (Equivalent): US 4927758 A

Prodn. of histidine comprises transformation of a Corynebacterium or Brevibacterium host microorganism with a vector contg. a gene

fragment from Corynebacterium glutamicum or Escherichia coli that encodes the formation of ATP-phosphoribosyltransferase; then propagation of the transformed microorganism is a suitable nutrient medium; and recovery of histidine from the medium.

USE - The process is an economical means of producing histidine on commercial scales.

US 4908312 A

Prodn. of phenylalanine comprises transforming a host microorganism (Corynebacterium or Brevibacterium strains) with recombinant DNA that contains a gene coding for chorismate mutase or prephenate dehydratase (isolated from Corynebacterium or Brevibacterium strains); propagation of the transformed microorganism in a suitable nutrient (contg. molasses as C source); and recovery of phenylalanine from the medium.

ADVANTAGE - The transformants give enhanced yields or L-phenylalanine (e.g. 6.0 and 9.6 mg/cm3).

(6pp)

US 4874698 A

Prodn. of tryptophane comprises transformation of a Corynebacterium or Brevibacterium host microorganism with a vector contg. a DNA fragment having an anthranilic acid synthetase gene, previously isolated from Corynebacterium glutamicum (ATCC 13032) or Brevibacterium flavum (ATCC 14067); propagation of the transformed microorganism in a nutrient medium contg. molasses as a carbon source; and recovery of the tryptophane from the medium.

USE - The prod. is a valuable nutrient and chemical intermediate.

(8pp)

US 4775623 A

Prodn. of L-arginine comprises transformation of cells of a Corynebacterium or Brevibacterium species with recombinant DNA or its active fragments contg. a gene which encodes the biosynthesis of L-arginine and a corresp. signal sequence; propagation of the transformed cells; and isolation of the aminoacid from the culture medium.

Pref. vector contains an Esherichia coli gene which encodes the formation of N-acetylglutamokinase, an enzyme involved in L-arginine biosynthesis.

USE - The prod. is a valuable nutrient and intermediate.

Derwent Class: B05; D16; E19
International Patent Class (Main): C12N-015/03; C12N-015/31; C12N-015/52; C12P-013/10; C12P-013/22
International Patent Class (Additional): C12N-001/20; C12N-001/21; C12N-015/53; C12N-015/54; C12N-015/57; C12N-015/60; C12N-015/61; C12P-013/04; C12P-013/06; C12R-001/13; C12P-013/10; C12R-001-13; C12R-001-15; C12R-001-19; C12P-013/22
?SS PN=JP 61195695
S14 1 PN=JP 61195695
?T S14/7/ALL

14/7/1
DIALOG(R)File 352:Derwent WPI
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004765431
WPI Acc No: 1986-268772/198641
Prepn. of threonine or isoleucine - includes culturing corynebacterium and plasmid with recombined homoserine dehydrogenase gene
Patent Assignee: AJINOMOTO KK (AJIN)
Number of Countries: 001 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 61195695	A	19860829	JP 8537168	A	19850226	198641	B
JP 93059710	B	19930831	JP 8537168	A	19850226	199337	

Priority Applications (No Type Date): JP 8537168 A 19850226
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 61195695	A		9		
JP 93059710	B		9	C12P-013/08	Based on patent JP 61195695

Abstract (Basic): JP 61195695 A

Prepn. involves culturing Coryneform bacterium having plasmid with recombined gene coding homoserine quinase and plasmid with recombined homoserine dehydrogenase gene.

USE/ADVANTAGE - Bacterium of invention gives high productivity of (I) and (II). (9pp Dwg.No.0/0)

Derwent Class: B05; D16; E16
International Patent Class (Main): C12P-013/08
International Patent Class (Additional): C12N-015/53; C12N-015/54; C12P-013/06; C12P-013/08; C12R-001-13
?SS PN= JP 61271981
S15 1 PN= JP 61271981
?T S15/7/1

15/7/1
DIALOG(R)File 352:Derwent WPI
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007012536
WPI Acc No: 1987-012533/198702
L-Histidine prodn. - using chromosome fragment obtd. from serratia microorganism
Patent Assignee: TANABE SEIYAKU CO (TANA)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 61271981	A	19861202	JP 85116075	A	19850528	198702	B

Priority Applications (No Type Date): JP 85116075 A 19850528
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 61271981	A		8		

Abstract (Basic): JP 61271981 A

Chromosome fragment serving L-histidine prodn. is collected from a microorganism having L-histidine prodn. capability and belonging to the Serratia gp. A hybrid plasmid incorporating the chromosome fragment into vector plasmid is contained in a microorganism belonging to the Serratia gp. to form a new microorganism. The new microorganism is cultured in a medium to grow and to store L-histidine in the medium. The L-histidine is collected from the medium.

USE/ADVANTAGE - Method provides a new microorganism having high L-histidine prodn. capability. L-histidine is effiently produced by using the new microorganism.

Derwent Class: B03; D16; E13
International Patent Class (Additional): C12N-001/20; C12N-015/00; C12P-013/24; C12R-001/42
?SS PN=JP 2000458
S16 1 PN=JP 2000458
?T S16/7/ALL

16/7/1
DIALOG(R)File 352:Derwent WPI
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008160992
WPI Acc No: 1990-047993/199007
New recombinant DNA used for microbial l-isoleucine prodn. - obtd. by proliferating plasmid or phage contg. integrated threonine deaminase gene etc.
Patent Assignee: AJINOMOTO KK (AJIN)
Number of Countries: 001 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 2000458	A	19900105	JP 87331374	A	19871225	199007	B
JP 2536570	B2	19960918	JP 87331374	A	19871225	199642	

Priority Applications (No Type Date): JP 87331374 A 19871225; JP 87257003 A 19871012
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 2000458	A		9		
JP 2536570	B2		6	C12N-001/21	Previous Publ. patent JP 2000458

Abstract (Basic): JP 2000458 A

In the prepn. a plasmid or phage (1) contg. integrated threonine deaminase gene is integrated and proliferated autonomously. A microbe (2) retaining the plasmid or phage (1) is claimed. A microbe (3) where pref. the E.coli threonine deaminase gene on plasmid is transferred to chromosome. The microbe strain of (2) is cultured, from the cultured soln., L-isoleucine is isolated. The microbe of (2) is cultured in threonine contg. medium, from the cultured soln., L-isoleucine is isolated.

The threonine deaminase gene is pref. derived from E.coli and is wild type gene. Threonine deaminase is pref. mutation gene and feedback inhibition is opened. The threonine deaminase gene is pref. under control of an original or another gene's promoter. The threonine deaminase gene is under control of original or other gene's tetracycline resistant gene's promoter. The microbe is pref. E.coli that can produce threonine, and it's repression of biosynthetic system of isoleucine and valine are opened. The microbe is pref. e.g. Coryneform glutamic acid producing bacteria. The microbe is esp. pref. Corynebacterium glutamicum. In (3), microbe is E.coli. Microbe retains plasmid or phage for raising producibility of L-threonine. Plasmid accompanies threonine operon of E.coli. Plasmid of (12) can coexist with plasmid of (1).

USE/ADVANTAGE - By using the DNA recombinant technique the producibility of L-isoleucine is increased. It has possible industrial applications.

Dwg.0/0

Derwent Class: B04; B05; D16; E16
International Patent Class (Main): C12N-001/21
International Patent Class (Additional): C12N-015/09; C12N-015/60; C12P-013/06; C12P-013/08; C12R-001/13; C12N-001/21; C12R-001-13; C12R-001-19
?SS PN=JP 2042988
S17 1 PN=JP 2042988
?T S17/7/ALL

17/7/1
DIALOG(R)File 352:Derwent WPI

008181590
WPI Acc No: 1990-068591/199010
Recombinant plasmid or phage contg. aceto-hydroxy acid synthase gene - used to transform microorganisms for improved prodn. of l-valine,

l-leucine or l-isoleucine
Patent Assignee: AJINOMOTO CO INC (AJIN); AJINOMOTO KK (AJIN)
Inventor: ENEI H; HASHIGUCHI K; SATO K; YOSHINO E
Number of Countries: 004 Number of Patents: 005
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 356739	A	19900307				199010	B
JP 2042988	A	19900213	JP 88194031	A	19880803	199012	
EP 356739	B1	19951213	EP 89114207	A	19890801	199603	
DE 68925083	E	19960125	DE 625083	A	19890801	199609	
			EP 89114207	A	19890801		
JP 2748418	B2	19980506	JP 88194031	A	19880803	199823	

Priority Applications (No Type Date): JP 88194031 A 19880803
Cited Patents: 3.Jnl.Ref; EP 179338; EP 183175; EP 190921; EP 233581; WO 8702984
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 356739	A	E	11		
Designated States (Regional): DE FR NL					
EP 356739	B1	E	13	C12N-015/52	
Designated States (Regional): DE FR NL					
DE 68925083	E			C12N-015/52	Based on patent EP 356739
JP 2748418	B2		6	C12N-015/09	Previous Publ. patent JP 2042988

Abstract (Basic): EP 356739 A

Plasmid or phage capable of autonomic multiplication and contg. the gene for acetohydroxy acid synthase (AHAS) is new. Also new are: (A) microorganism carrying the plasmid or phage; (B) microorganism with the AHAS gene; in the plasmid transferred to the chromosome; (C) recombinant DNA contg. the AHAS gene; and (D) prodn. of L-Val, L-Leu, or L-Ile by growing the microorganism and recovering the aminoacid from the culture medium.

USE/ADVANTAGE - Transformed microorganisms give improved prodns. of L-Val, L-Leu and L-Ile. AHAS is the key enzyme common to the biosynthesis of each aminoacid but is normally subject to inhibition by the end prods. Use of AHAS mutants releases the enzyme from this negative feedback, and the no. genes coding for AHAS is increased in each genome.

0/1

Abstract (Equivalent): EP 356739 B

A plasmid or phage capable of autonomic multiplication having the gene for acetohydroxy acid synthetase derived from a microorganism belonging to the genus Brevibacterium, incorporated therein.

Dwg.0/1

Derwent Class: B05; D16; E16
International Patent Class (Main): C12N-015/09; C12N-015/52
International Patent Class (Additional): C12N-001/20; C12N-001/21; C12N-007/01; C12N-015/77; C12P-013/06; C12P-013/08; C12R-001/13; C12N-015/52; C12R-001-13; C12R-001-15
?SS PN=JP 89042676
S18 1 PN=JP 89042676
?T S18/7/1

18/7/1
DIALOG(R)File 352:Derwent WPI
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003157245
WPI Acc No: 1981-17786D/198111
Fermentative prodn. of L-histidine - by incorporating a plasmid hybrid into a recipient strain of Escherichia

Patent Assignee: AJINOMOTO KK (AJIN)
Inventor: SANO K; TSUCHIDA T
Number of Countries: 005 Number of Patents: 007
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
GB 2055805	A	19810311				198111	B
JP 56005099	A	19810120	JP 7979851	A	19790625	198111	
FR 2459832	A	19810220				198115	
DE 3023850	A	19810416				198117	
GB 2055805	B	19830309				198310	
US 4388405	A	19830614				198326	
JP 89042676	B	19890913				198940	

Priority Applications (No Type Date): JP 7979851 A 19790625

Abstract (Basic): GB 2055805 A

The hybrid plasmid is inserted with a DNA acid fragment possessing genetic information relating to L-histidine prodn. and obtd. from a mutant of Escherichia resistant to a histidine analogue.

Higher yields of L-histidine are obtd. and the product has fewer other aminoacid contaminants.

Derwent Class: B03; D16; E13
International Patent Class (Additional): C07D-233/64; C12N-001/20; C12N-015/00; C12P-013/24; C12R-001/18
?SS PN=JP 93011960
S19 1 PN=JP 93011960
?T S19/7/ALL

19/7/1
DIALOG(R)File 352:Derwent WPI

003705027
WPI Acc No: 1983-701209/198327
L-Histidine producing Bacillus strain - which incorporates recombinant plasmid DNA contg. fragment controlling resistance to histidine antagonist
Patent Assignee: AJINOMOTO KK (AJIN)
Inventor: ENEI H; KAWASHIMA N; KURASHASHI O; NAKAMORI S; TSUCHIDA T
Number of Countries: 005 Number of Patents: 004
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 82637	A	19830629				198327	B
JP 58107192	A	19830625				198331	
US 4504581	A	19850312	US 82448792	A	19821210	198513	
JP 93011960	B	19930216	JP 81204577	A	19811218	199310	

Priority Applications (No Type Date): JP 81204577 A 19811218
Cited Patents: 2.Jnl.Ref; GB 2055805; No-SR.Pub
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 82637	A	E	13		
Designated States (Regional): DE FR GB					
JP 93011960	B		4	C12P-013/24	Based on patent JP 58107192

Abstract (Basic): EP 82637 A

L-histidine (I)-producing microorganism is the prod. of incorporating into a recipient strain of Bacillus a recombinant plasmid DNA contg. a DNA fragment controlling resistance to a (I)-antagonist and obtd. from chromosomal DNA or a mutant of Bacillus resistant to the (I(-antagonist.

Pref. the mutant and/or recipient strain is/are of the species

Bacillus subtilis; the (I)-antagonist is 1,2,4-triazolealanine and the recipient strain is resistant to the (I)-antagonist and required (I) for growth.

(I)-producing microorganism is the prod. of incorporating a first recombinant plasmid into a first recipient strain of Bacillus the first recombinant plasmid contg. a DNA fragment controlling resistance to a (I)-antagonist and obtd. from a transformant of Bacillus, which transformant has been constructed by incorporating a second hybrid plasmid into a second recipient strain of Bacillus, the second recombinant plasmid controlling resistance to a (I)-antagonist and obtd. from a mutant of Bacillus resistant to the (I)-antagonist. The second recipient strain of Bacillus is a (I)-requiring strain and the first recipient strain of Bacillus is resistant to a (I)-antagonist. The recombined plasmid-contg. microorganisms can be used in the efficient prodn. of (I) when cultured aerobically.

Abstract (Equivalent): US 4504581 A

Prodn. of L-histidine by fermentation comprises (a) aerobically culturing an L-histidine-producing microorganism constructed by incorporating a recombinant plasmid DNA inserted on a DNA fragment which controls resistance to a histidine antagonist into a recipient strain of Bacillus and (b) recovering the L-histidine accumulated in the culture medium. The fragment is obtd. from the chromosomal DNA of a mutant Bacillus which is resistant to the histidine antagonist.

Pref. both mutant and recipient belong to Bacillus subtilis. Pref. the recipient is Bacillus subtilis AJ11732 and the donor is Bacillus subtilis AJ11733. (4pp)

Derwent Class: B03; D16; E13
International Patent Class (Main): C12P-013/24
International Patent Class (Additional): C12N-001/20; C12N-015/31; C12R-001/12; C12P-013/24; C12R-001-125

?SS PN=JP 93026467
S20 1 PN=JP 93026467
?T S20/7/1

20/7/1
DIALOG(R)File 352:Derwent WPI

004298326
WPI Acc No: 1985-125204/198521
Recombinant DNA - contained in bacteria for L-histidine prepn.
Patent Assignee: AJINOMOTO KK (AJIN)
Number of Countries: 001 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 60062983	A	19850411	JP 83170006	A	19830914	198521	B
JP 93026467	B	19930416	JP 83170006	A	19830914	199318	

Priority Applications (No Type Date): JP 83170006 A 19830914
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 60062983	A		7		
JP 93026467	B		9	C12P-013/24	Based on patent JP 60062983

Abstract (Basic): JP 60062983 A

Recombinant DNA with gene coding histidinolphosphatase and plasmid vector can be grown intracellular or corynebacterium bacteria. The bacteria has the recombinant DNA in the cell, and L-histidine is made by culturing the bacteria.

Typically, in the prepn. of chromosome DNA contg. HP gene, Brevibacterium lactofermentum AJ12036 is shake cultured on CMG medium, bacteriolyses by lysozyme SDS. For insertation of chromosome DNA

fragment into vector, chromosome DNA and plasmid DNA are separately treated with restriction endonuclease PstI. Ligation of DNA chain is performed with DNA ligase originated T4 phage, in presence of ATP and DTT. For cloning of HP gene, Brevibacterium lactofermentum AJ12074 which is defective HP gene is used as acceptor bacteria.

Derwent Class: B04; D16
International Patent Class (Main): C12P-013/24
International Patent Class (Additional): C12N-001/20; C12N-001/21; C12N-015/55; C12R-001/13; C12P-013/24; C12R-001-13
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